Final year B pharm Sem VII Oct 2009
Biophar and pharmacokinetic

P4–Exam.–Oct-09–133

Con. 4802–09. **DY–5135**

(2 Hours) **[Total Marks : 35**

N.B. : (1) Question No. **1** is **compulsory**.
(2) Answer any **four** of the remaining **six** questions.

1. List the different mechanisms by which drug can be absorbed. Describe any four dosage form related factors that affect dmg absorption. 7

2. Discuss with examples drug binding to plasma proteins. Also describe in brief tissue binding and its impact on the volume of distribution. 7

3. (a) Describe in two or three sentences : 6
   (i) Non linear kinetics
   (ii) Bioequivalence
   (iii) Dissolution Rate limited absorption.

   (b) An intravenous dose is necessary for determination of absolute bioavailability. True or False. Explain. 1

4. (a) Discuss the various theories of drug dissolution. 5
   (b) Describe the assumptions of a one compartment model. 2

5. Write notes on (any **two**) :– 7
   (a) Hepatic extraction ratio
   (b) IVIVC
   (c) Renal clearance
   (d) Measurement of relative bioavailability.

6. An intranvenous bolus dose [125 mg] of a drug following one compartment kinetics gave an extrapolated concentration at zero time of 25 microgram/L and a 'K' value of 0·82 hr^{-1}. 7
   (a) Calculate the half life and volume of distribution
   (b) How much drug will be eliminated in 2·5 hours
   (c) How much drug will be present in the body after 2 hours.

7. Write notes on (any **two**) :– 7
   (a) Multicompartment models
   (b) Sigma Minus Method
   (c) Official dissolution apparatus as per IP.